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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,637	04/26/2001	Shuhei Marukawa	10873.703US01	9215
23552	7590	01/12/2005	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			CHANEY, CAROL DIANE	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

15

Office Action Summary

Application No.

09/843,637

Applicant(s)

MARUKAWA ET AL.

Examiner

Carol Chaney

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 13 October 2004 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "balance position" in claims 1 and 2 appears to be used by the claim to mean "a force exerted on a set of battery cells", while there is no accepted meaning for the term in the battery arts. The term is indefinite because the

Art Unit: 1745

specification does not clearly define the term. Applicants' specification states "in Figure 6B, a crossing point between the F-S curves of the unit cells 20a and 20b corresponds to a balance position P where the loads of both the unit cells are matched with each other." There are an infinite number of values of load which are identical for both the unit cells, and the crossing point between the "F-S curves" for the two cells can be arbitrarily shifted by arbitrarily shifting the positions of the two F-S curves with respect to each other along the x-axis. Consequently, the "balance position" is arbitrary, and is thus undefined. Applicants' specification states that "it is understood from Figure 6B that after binding, the width S of the unit cell 20a becomes 19.4 mm, and the width S of the unit cell 20b becomes 19.6 mm." However, no explanation of how these "understood" values are obtained is provided.

Furthermore, the meaning of "a balance position P *between*...cell(s)" is unclear. It appears from applicants' specification that external forces applied to individual battery cells are discussed.

Claim Rejections - 35 USC §102

The texts of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimakawa et al., US Patent 5,817,435, for essentially the reasons of record.

Shimakawa et al. disclose a battery comprising two end plates (33) and a

Art Unit: 1745

plurality of cells (10) stacked adjacent to each other and bound by the end plates. The cells include a casing (12) of polyphenylene ether, polystyrene and preferably an elastomer. (column 3, lines 50-55.) The dimensions of the end plates and the binding members, which determine binding forces, are set in part by the number of stacked cells in the battery. (Column 6, lines 13-28.) The end plates and binding rods will cause the battery containers to be compressed immediately after assembly. As can be seen from Table 3 in column 8 of the Shimakawa et al. reference, battery casings were held at 60°C with an internal pressure of 0.2 MPa, or about 2 atmosphere, for over 10,000 hours without breakage. Since the battery cases did not break, there was clearly no irreversible deformation beyond an expansion limit of the battery container.

With regards to claim 2, it is noted from a comparison of Figs. 3 and 4 of the Shimakawa et al. patent that that the cells include a plate group, and the cells and the electrode plates are stacked in the same direction.

Response to Arguments

Applicant's arguments filed 13 October 2004 have been fully considered but they are not persuasive. Applicants argue Shimakawa assumes that the internal pressures of all the cells in the battery are increased simultaneously and never contemplates the situation where the internal pressure of only one or less than all the cells in the plurality is increased. However, applicants' claims are directed to a battery with a plurality of

Art Unit: 1745

cells bound by two end plates under the condition that "no more than a predetermined amount of irreversible deformation is caused in the battery container."

Shimakawa et al. clearly disclose such a battery because irreversible deformation does not occur in the battery. The conditions claimed by the applicants will inherently hold in the Shimakawa et al. battery, even if the forces are not calculated by Shimakawa et al. The actual batteries claimed by the applicants and Shimakawa et al. are not distinguished, even though applicants and the prior art do not use identical description of the batteries.

The calculations used to determine the appropriate binding force applied by the end plates do not effect the patentability of the claimed battery since the patentability of a product is independent of how it was made. Ex parte Jungfer 18 USPQ 1796, 1800 (BPAI 1991); Bristol-Myers Co. v. U.S. International Trade Commission 15 USPQ 2d 1258 (Fed. Cir. 1989). The burden is on applicants to show product differences in product by process claims. In re Thorpe 227 USPQ 964 (Fed. Cir. 1985); In re Best 195 USPQ 430 (CCPA 1977).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol Chaney whose telephone number is (571) 272-1284. The examiner can normally be reached on Mon - Fri 8:30am-5:00pm.

Art Unit: 1745

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Carol Chaney
Primary Examiner
Art Unit 1745

9 January 2005